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Socioeconomic status (SES) is one of the strongest known predictors of variations in health status in both industrialized and less industrialized countries. Despite advancements in the quality and availability of medical care, the advent of universal education, increased economic development, and marked improvements in the standard of living during this century, the strong inverse association between SES and morbidity and mortality that was evident in our earliest health data has diminished little, if any, over time in the United States. This pattern exists for infant and adult mortality, chronic and infectious disease morbidity, and psychiatric

morbidity. One recent study found, for example, that poverty makes a contribution to the national death rate in the United States that is comparable to that of cigarette smoking.¹

The paper by Krieger et al.² (which follows in this issue) documents that U.S. public health departments do not routinely collect comprehensive indicators of SES.

Asian and Pacific Islander population) is three times higher than among white Americans, two-thirds of black people in this country are not poor and two-thirds of all poor Americans are white.

Ironically, the dependence on "racial" data in conjunction with the absence of socioeconomic data also limits our ability to monitor the health status of vulnerable social groups over time. While the availability of "racial" identifiers in public health databases has facilitated the identification of widening black-white disparities in health in recent decades—between 1980 and 1991, for example, the black-white gap in health status widened for life expectancy and infant mortality⁴—SES data are necessary to truly understand "racial" differences. Adjusting "racial" disparities in health for SES substantially reduces them but does not fully explain the disparity. Researchers frequently find that within each SES level, African Americans still have worse health status than whites. In addition, for some health status indicators, "racial" disparities become larger with increasing SES. Thus, instead of abandoning the collection of "racial" data, recommendations from two conferences organized by Federal health agencies have called for more routine presentation of "racial" data stratified by SES.^{5,6}

This finding that "race" is often associated with morbidity and mortality independent of SES emphasizes that "race" is more than SES, and understanding the sources of "racial" differences in health will require increased attention to the health consequences of economic and noneconomic forms of "racial" discrimination. In addition, the public health community should be aware of limitations in the measurement of SES, including the nonequivalence of SES indicators across "racial" categories. Historic and contemporary expressions of institutional discrimination have led to "racial" differences in the quality of education, income returns for a given level of education, wealth associated with a given level of income, the purchasing power of income, the stability of employment, and the health risks associated with occupational status.⁷

Creating Uniform Datasets

The findings from the Krieger et al. study are timely. Major efforts are currently underway to identify the data elements that should be included in national uniform standardized datasets.^{8,9} Recent research documents

Missed Opportunities in Monitoring Socioeconomic Status

Intersection of SES and "Race"

The easy availability of "racial" identifiers in public health databases has led researchers to sometimes use "race" as a crude proxy for economic inequality. This is not without some justification given the growing recognition in the health field that "racial" categories do not reflect biological distinctiveness but capture some of the inequality and injustice that characterizes our society.³

The preoccupation of our health data system with "racial" differences in health status has led to limited appreciation of the contribution of SES—it is not generally recognized that SES differences in health in the United States are larger than "racial" ones. While there is overlap between the concept of "race" and SES, they are not equivalent. For example, although the rate of poverty among black Americans (as well as among Hispanics, American Indians, and some subgroups of the

that reliability and validity problems with the assessment of "race" affect the quality of health data.^{10,11} Unfortunately, researchers using social variables such as "race" and SES typically pay inadequate attention to issues of data quality, a problem noted by Krieger et al. It has long been known that SES differentials in health status are evident regardless of the indicator of SES used, but it is likely that each SES indicator captures exposure to distinctive risk factors and resources. There is an urgent need to improve the quality of the data collected to characterize socioeconomic position.

Greater uniformity in the assessment of SES would ensure the availability of comparable data across different public health departments and health databases. Given the central role of SES in health, it is critical to include indicators of SES in any minimum core dataset. Important changes are taking place in the organization and delivery of medical services in the United States, and it is vital to monitor the impact of these changes

on health care access and health status for vulnerable subgroups of the population and for small geographic areas.

Recently the Office of Management and Budget (OMB) coordinated a major effort to gather the appropriate scientific and public information to develop optimal measures of "race" and ethnicity for the United States.¹² [See Viewpoint on "racial" and ethnic classifications by Trude Bennett in this issue, on page 477.] This process involved the collaboration of the National Academy of Sciences' Committee on National Statistics, the Bureau of the Census, and an interagency task force representing major Federal statistical agencies. The National Committee on Vital and Health Statistics (NCVHS), the public advisory body to the Department of Health and Human Services (DHHS) on health data, has called for more universal reporting of SES data and a program of research to identify the optimal indi-

cators of SES for various public health contexts.¹³ Similarly, a National Institutes of Health conference on social inequalities in health developed a comprehensive set of recommendations for the collection of SES data in vital statistics, epidemiologic studies, and disease registries.^{6,14}

In the light of these initiatives, the findings of Krieger et al. suggest that the time has come for OMB, in cooperation with DHHS and NCVHS, to conduct a comprehensive review of the current standards and practices regarding the collection and publication of socioeconomic data. Deliberations regarding the improved assessment of SES should address questions about feasibility and the protection of confidentiality. However, the central goal should be the identification of the core set of SES indicators that should be utilized by Federal and state agencies and the research community in public health and other data systems.

Recommendations

In the meantime, there are things to be done. First, we can report the data that are collected. The underutilization of state-collected SES data is, arguably, the most striking finding of the Krieger et al. paper. While both education and occupation are widely collected SES measures in public health data systems, these data are seldom reported. For example, only 15% of the states that collected data on education in state death registries publish death data by education of the decedent. Obtaining additional information for local areas is one of the critical needs in monitoring the health of the population, and our vital statistics system is an important source of information on local estimates. It is thus critical to maximize the use of relevant available data.

The second missed opportunity noted by Krieger et al. is the limited geocoding of addresses in public health data. Geocoding is the linking of Census-based sociodemographic characteristics of residential areas to an indi-

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vidual's address. Some U.S. studies indicate that neighborhood characteristics predict variations in mortality independent of individual-level SES indicators. British studies have also found a robust relationship between area-based measures of deprivation and health status.^{15,16} In an era of dwindling economic resources to support public health programs and data systems, the geocoding of data provides a relatively inexpensive way to monitor an important part of socioeconomic inequalities.

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